

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 15, 16, 19-21, 25, and 27-35 are pending in this application. Withdrawn claims 1-14, 17, 18, 22-24, and 26 are canceled by the present response without prejudice.

Claims 15-16, 19/15, 19/16, 20, 21, 25/20, 27/20, 29/20, 25/21, 27/21, 29/21, 33, and 35 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent 6,713,162 to Takaya et al. (herein "Takaya '162'") in view of U.S. patent 6,864,774 to Kanetaka et al. (herein "Kanetaka'").¹ Claim 34 was rejected under 35 U.S.C. § 103(a) as unpatentable over Takaya in view of U.S. patent application publication 2003/0227664 to Agrawal et al. (herein "Agrawal'"). Claim 28 was rejected under 35 U.S.C. § 103(a) as unpatentable over Takaya in view of U.S. patent 5,116,663 to Fujimoto et al. (herein "Fujimoto'"). Claims 30-32 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. patent application publication 2002/000987 to Takaya et al. (herein "Takaya '957'").

Initially, applicant and applicants' representative wish to thank Examiner Mai for the interview granted applicants' representative on June 8, 2006. During the interview the outstanding rejections were discussed in detail. Further, during the interview claim amendments to clarify certain claim features were discussed. The present response sets forth the discussed claim amendments, and reiterates comments made during the interview to the allowability of the claims over the applied art. Examiner Mai indicated she would further consider such amended claims and comments when formally presented in a filed response.

Addressing the above-noted rejections, those rejections are traversed by the present response.

The claims set forth a structure such as shown for example in Figure 2(A) in the present specification. As shown in Figure 2(A) exposed end portions of the band-shaped

¹ This basis for the outstanding rejection cites U.S. patent 6,713,162 to Takaya, which has not been made of record. Applicants request that reference be made of record by being cited on a form PTO-892.

conductors 2 are connected to one another through individual of the plurality of bridging conductors 21, and thereby a helical coil is formed from those elements. That is, according to the claimed invention a helical coil is formed by connecting exposed end portions of the band-shaped conductor patterns on each of first and second cut surfaces of a sintered core board. Bridge conductor patterns are formed on the core board to connect the exposed end portions of the band-shaped conductor patterns formed on the front and back surfaces of the core board. Therefore, an area of the cross-section of the internal conductor of a helical coil can be made greater, and thereby an inductance and a Q-value can be increased. Such a structure is believed to clearly distinguish over the applied art.

First, Takaya '162 shows, as relied upon in the Office Action, the use of conductors 13 and bridging conductor patterns 12. However, the structure in Takaya '162 differs from the claimed features as no combination of the elements 13 and 12 form a helical coil.

As shown for example in Figures 3-4 of Takaya '162 individual of patterns 12 do not connect end portions of conductors 13 to form a helical coil.

In contrast to Takaya '162, as shown in Figure 2(A) individual of the bridging conductors 21 connect to respective end portions of the band-shaped conductor patterns 2 on front and back surfaces, and thereby a helical coil is formed from the band-shaped conductor patterns 2 and bridging conductors 21. Such a structure does not exist in Takaya '162.

The Office Action relies on Figure of Takaya '162 to disclose bridging conductor patterns 12 formed on cut surfaces of a board sliced transversely with respect to band-shaped conductor patterns. However, reference numeral 12 in that Figure 3 represents terminal electrodes of the inductor, but is not a helical coil. Further, the conductor patterns 12 ***do not connect between conductors 13 formed on front and rear surfaces of a core board.***

In contrast to the claimed features, according to Takaya '162 via holes 14 are provided for electrical connection to the conductors 13. Clearly such via holes are not formed on first and second surfaces of a core board.

In such ways, the claims as currently written are believed to distinguish over Takaya '162.

Moreover, no teachings in Kanetaka were cited with respect to the above-noted structure; Kanetaka was merely cited for an inorganic sintered core substrate. Thereby, no teachings in Kanetaka are believed to cure the above-noted deficiencies of Takaya '162.

Moreover, no teachings in Agrawal or Fujimoto are believed to cure the above-noted deficiencies of Takaya '162.

Further, with respect to the rejection of claims 30-32 under 35 U.S.C. § 102(b) as anticipated by Takaya '577, that rejection is traversed by the present response for similar reasons as discussed above.


Independent claim 30 is amended similarly as discussed above with respect to independent claim 15, and Takaya '577 suffers from similar deficiencies as discussed above with respect to Takaya '162. Thus, claims 30-32 are also believed to distinguish over the applied art.

In view of these foregoing comments, applicants respectfully submit the claims as currently written distinguish over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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